REMARKS

Amendments

Claims 26, 28-30, 32, 33 and 35 were examined. Claims 32 and 33 have been allowed. Claims 26, 28-30 and 35 were rejected. In this response, claim 30 has been amended and claims 26, 28, 29, and 35 have been canceled. Further, claims 1-25 have been canceled in the previous response. The previous section, titled "Amendments to the Claims" contains a complete listing of the status of each claim.

The amendments to the claims do not add or constitute new matter. Support for the amended claims may be found throughout the specification and originally filed claims. More particularly, support for claim 30 directed to a method of producing transgenic mice exhibiting a hypoactive phenotype and having a disruption in the melanocyte stimulating hormone receptor gene may be found, for example, at page 18, lines 22-24, page 19, lines 33-35, page 21, lines 11-22, page 39, lines 28-29 and page 59, lines 18-36 through page 60, line 9 of the specification. As such, no new matter has been added.

The foregoing amendments are made solely to expedite prosecution of the instant application, and are not intended to limit the scope of the invention. Further, the amendments to the claims are made without prejudice to the pending or now canceled claims or to any subject matter pursued in a related application. Applicants reserve the right to prosecute any canceled subject matter at a later time or in a later filed divisional, continuation, or continuation-in-part application.

Upon entry of the amendment, claims 30, 32 and 33 are pending in the instant application.

Rejection under 35 U.S.C. § 103

Claims 26, 28, 29 and 35 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mansour *et al.* (1998) *Nature* 336(24):348-352 ("Mansour") in view of Mountjoy *et al.* (1992) *Science* 257:1248-1251 ("Mountjoy") and Adachi *et. al.* (1999) *J. Immunology* 163:3363-3368 ("Adachi"). Applicants respectfully traverse the holding of this rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143.

Applicants maintain the assertion that the references, either alone or combined as suggested by the Examiner, clearly fail to teach all of the limitations as recited in the pending claims as is required to establish a prima facie case of obviousness. In any case, the rejection is no longer relevant as a result of the cancellation of these claims. Therefore, Applicants respectfully request that the rejection be withdrawn. Applicants submit that claims 30, 32 and 33 are not obvious in view of the cited references.

Rejection under 35 U.S.C. § 112, second paragraph

The Examiner rejected claim 30 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants respectfully traverse this rejection.

More particularly, the Examiner alleges that claim 30 is incomplete for omitting essential steps, such omission amounting to a gap between steps. The Examiner alleges that this omitted step is "selecting the appropriate ES cells having undergone homologous recombination." Although Applicants disagree that the omission of this step resulted in a gap between steps, Applicants have amended the claim to recite the step of selecting the ES cell, as suggested in the Office Action.

The Examiner has further asserted that recitation of the phrase "pseudopregnant mouse gives birth" renders the claim indefinite because a pseudopregnant mouse cannot give birth. Although Applicants traverse this aspect of the rejection, in order to overcome the rejection, Applicants have adopted the Examiner's suggestion to amend the claim, which now recites "the resulting mouse gives birth."

As a result of the amendments to claim 30, the rejection under 35 U.S.C. § 112, second paragraph, is no longer relevant, and Applicants request withdrawal of this rejection.

Applicants submit that the pending claims, in their current form, are definite and particularly point out and distinctly claim the subject matter regarded as the invention in accordance with 35 U.S.C. § 112, second paragraph.

It is believed that the claims are currently in condition for allowance, and notice to that effect is respectfully requested. The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1271 under Order No. R-654.

Respectfully submitted,

Date: March 17, 2004

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